

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Tsuneyuki Kikuchi

Application No.: 10/574,664

Confirmation No.: 7638

Filed: March 31, 2006

Art Unit: 2617

For: WIRELESS LINE SHARING NETWORK  
SYSTEM, AND ADMINISTRATIVE  
APPARATUS AND METHOD THEREOF

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Examiner: N. Mehrpour

**APPEAL BRIEF**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed more than two months after the Notice of Appeal filed in this case on June 24, 2009, and is in furtherance of said Notice of Appeal.<sup>1</sup>

The fees required under § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205.2:

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<sup>1</sup> The Notice of Appeal was filed together with a Pre-Appeal Brief Request for Review filed on June 24, 2009. The Notice of Panel Decision dated October 6, 2009 set the time for filing of the Appeal Brief to an extendible period starting at November 6, 2009 (one month after the date of the Decision). Thus, this paper is being filed with a two month extension of time.

I.	Real Party In Interest
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I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

NEC CORPORATION

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 23 claims pending in application.

B. Current Status of Claims

1. Claims canceled: 5, 13 and 21
2. Claims withdrawn from consideration but not canceled: none
3. Claims pending: 1-4, 6-12, 14-20 and 22-26
4. Claims allowed: none
5. Claims rejected: 1-4, 6-12, 14-20 and 22-26

C. Claims On Appeal

The claims on appeal are claims 1-4, 6-12, 14-20 and 22-26.

IV. STATUS OF AMENDMENTS

Applicant filed an Response to Final Action on May 8, 2009. The Examiner responded to the Response to Final Action in an Advisory Action mailed June 4, 2009. As no claim amendments were made in the Response dated May 8, 2009, the claims in Appendix A incorporate the amendments indicated in the paper filed by Applicant on December 24, 2008, when the claims were last amended.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following descriptions of independent claims 1, 10, 18 and 26 refer to the embodiments described generally in Figs. 2 and 12.

Specification citations are provided in accordance with 37 C.F.R. § 41.37, such reference numerals and citations are merely examples of where support may be found in the specification. There is no intention to suggest in any way that the terms of the claims are limited to the examples in the specification or the specific citations used. As demonstrated by the reference numerals and citations below, the claims are fully supported by the specification as required by law. However, it is improper under the law to read limitations from the specification into the claims. The reference numerals and specification citations are not to be construed as claims limitations or in any way used to limit the scope of the claims.

A. Independent Claim 1:

A wireless line sharing network system in a mobile communication network system (e.g., 1 and 11) capable of a plurality of communications at licensed radio frequencies, comprising:

a plurality of user terminals that subscribe to a plurality of communication carriers (e.g., users of communication carriers A, B and C in Fig. 2), respectively;

a plurality of wireless base stations (e.g., BS1 . . . BS<sub>n</sub>) capable of communicating with the respective user terminals at the radio frequencies;

a control station (e.g., 10) for controlling the wireless base stations and connecting each of the user terminals to a corresponding communication carrier network (core networks of communication carriers A, B and C in Fig. 2);

a call acceptance controller (e.g., 101) for, when there is a request for call connection to a user terminal, accepting the call as well as reserving bandwidth in response to the call connection request based on at least carrier band information indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract and carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers, and updating the carrier use condition information (see, e.g., page 3, lines 10-17; page 5, lines 4-9; page 7, lines 13-18); and

a bandwidth change means (e.g., 103) for sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and user use condition information indicating the current use conditions of the call connected ones of the user terminals. (See, e.g., page 22, line 13 to page 25, line 24).

B. Independent Claim 10:

An administrative apparatus (e.g., 11) for sharing a mobile communication network capable of a plurality of communications at licensed radio frequencies among a plurality of communication carriers, the apparatus comprising:

a first table for searchably storing carrier band information (e.g., 104) indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract (see, e.g., page 11, lines 10-14);

a carrier use condition memory (e.g., 105) for searchably storing carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers (see, e.g., page 12, line 25 to page 13, line 14);

a user use condition memory (e.g., 105) for searchably storing user use condition information indicating the current use conditions of call connected ones of a plurality of user terminals that subscribe to the communication carriers, respectively (see, e.g., page 12, line 25 to page 13, line 14);

a controller (e.g., 101) for controlling the used bandwidth of each of the communication carriers in units of at least bandwidth used by each user terminal based on the carrier band information, the carrier use condition information and the user use condition information, and updating the carrier use condition information and the user use condition information (e.g., page 16, lines 6-17, step S109); and

a bandwidth change means (e.g., 103) for sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition

information and user use condition information indicating the current use conditions of the call connected ones of the user terminals (See, e.g., page 22, line 13 to page 25, line 24).

C. Independent Claim 18:

An administrative method for sharing a mobile communication network capable of a plurality of communications at licensed radio frequencies among a plurality of communication carriers, the method comprising the steps of:

searchably storing carrier band information indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract (see, e.g., 104; page 11, lines 10-14);

searchably storing carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers (see, e.g., 105; page 12, line 25 to page 13, line 14);

searchably storing user use condition information indicating the current use conditions of call connected ones of a plurality of user terminals that subscribe to the communication carriers, respectively (see, e.g., 105; page 12, line 25 to page 13, line 14);

determining, when a user terminal requests call connection, whether or not there is idle bandwidth available for accommodating the call connection request based on the carrier band information and carrier use condition information (see, e.g., 101, 107, 106, page 14, lines 17-28; step S105);

forwarding, when there is idle bandwidth available for accommodating the call connection request, the call connection request to a communication carrier network corresponding to the user terminal (step S110; page 16, lines 24-29);

determining bandwidth for the call connection request based on a response to the call connection request from the communication carrier network (step S107; page 16, lines 6-17);

updating the carrier use condition information and the user use condition information according to the determined bandwidth (step S108; page 16, lines 6-17); and

sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and the user use condition information. (See, e.g., 103; page 22, line 13 to page 25, line 24).

D. Independent Claim 26:

A computer readable medium storing a computer program for sharing a mobile communication network capable of a plurality of communications at licensed radio frequencies among a plurality of communication carriers, the computer program causing a computer to perform the steps of:

searchably storing carrier band information indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract (see, e.g., 104; page 11, lines 10-14);

searchably storing carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers (see, e.g., 105; page 12, line 25 to page 13, line 14);

searchably storing user use condition information indicating the current use conditions of call connected ones of a plurality of user terminals that subscribe to the communication carriers, respectively (see, e.g., 105; page 12, line 25 to page 13, line 14);

determining, when a user terminal requests call connection, whether or not there is idle bandwidth available for accommodating the call connection request based on the carrier band information and carrier use condition information (see, e.g., 101, 107, 106, page 14, lines 17-28; S105);

forwarding, when there is idle bandwidth available for accommodating the call connection request, the call connection request to a communication carrier network corresponding to the user terminal (step S110; page 16, lines 24-29);

determining bandwidth for the call connection request based on a response to the call connection request from the communication carrier network (step S107; page 16, lines 6-17);

updating the carrier use condition information and the user use condition information according to the determined bandwidth (step S108; page 16, lines 6-17); and

sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and the user use condition information (See, e.g., 103; page 22, line 13 to page 25, line 24).

## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. The rejection of claims 1-4, 6-12, 14-20 and 22-26 under 35 U.S.C. § 103 over U.S. Patent Publication No. 2003/87643 (Mazzara) in view of U.S. Patent Publication No. 2005/0048985 (Haartsen).

## VII. ARGUMENT

Claims 1-4, 6-12, 14-20 and 22-26 are pending in this application. Claims 1-4, 6-12, 14-20 and 22-26 stand improperly rejected in view of the prior art. In light of the remarks set forth



below, Applicant respectfully submits that each of the pending claims is in immediate condition for allowance.

A. Claims 1-4, 6-12, 14-20 and 22-26 are not rendered obvious by Mazzara and Haartsen.

Claims 1-4, 6-12, 14-20 and 22-26 stand improperly rejected under 35 U.S.C. § 103 over U.S. Patent Publication No. 2003/87643 (Mazzara) in view of U.S. Patent Publication No. 2005/0048985 (Haartsen). Applicant respectfully submits that the board must order the withdrawal of this rejection.

Independent Claims 1, 10, 18 and 26

Independent claim 1 recites, inter alia, a bandwidth change means for sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and user use condition information indicating the current use conditions of the call connected ones of the user terminals.

Mazzara shows a wireless line sharing network. It was conceded in the Final Office Action mailed February 26, 2009 (the "final Office Action") that Mazzara does not teach the recited bandwidth change means. Paragraphs [0019] and [0020] of Haartsen were cited in the Office Action as allegedly providing this feature. See final Office Action, pages 3-4. Applicant disagrees.

The cited paragraphs of Haartsen state:

"[0019] In one aspect, the invention provides, in a communication system that implements communication links between a multi-radio base station and a plurality of remote terminals, wherein each remote terminal requests a particular bandwidth ratio, a method of allocating slots in the communication links comprising the steps of: (a) sequentially assigning, in descending order based upon the respective remote terminal's required bandwidth ratio, remote terminals to an available base station radio, and (b) after the available base station radios have been assigned a first remote terminal, assigning the remaining remote terminals,

in descending order based upon the respective remote terminal's required bandwidth ratio, to the base station radios in the reverse sequence implemented in step (a).

[0020] In another aspect, the invention provides, in a communication system that implements communication links between a multi-radio base station and a plurality of remote terminals, wherein each remote terminal requests a particular bandwidth ratio, a method of allocating slots in the communication links comprising the steps of: (a) determining the minimum number of base station radios required to support the remote terminals' transmission requirements, and (b) sequentially assigning, in descending order based upon the respective remote terminal's required bandwidth ratio, remote terminals to an available base station radio selected from the minimum number of base station radios calculated in step (a), and (c) after the available base station radios have been assigned a first remote terminal, assigning the remaining remote terminals, in descending order based upon the respective remote terminal's required bandwidth ratio, to the base station radios in the reverse sequence implemented in step (b)."

Paragraphs [0019] and [0020] of Haartsen relate to the base station, making use of multiple base station radios, accommodating requested bandwidth ratios of individual remote terminals. The system sequentially assigns remote terminals to a particular base station radio of the base station, based on the remote terminal's requested bandwidth ratio. This is not the same as the recited feature of claim 1 discussed above, in at least two respects.

First, the cited paragraphs of Haartsen relates to *bandwidth ratios*, and not bandwidths, and there is no teaching at all in the cited portion of Haartsen of *sequentially changing bandwidths*, as explicitly required in claim 1.

Second, as can be seen from the foregoing quoted paragraphs, Haartsen's system *accommodates* the bandwidth ratio *requirements of the remote terminal* by assigning an appropriate base station radio to the remote terminal based on the required bandwidth ratio. In contrast, claim 1, discussed above, sequentially changes the bandwidths allocated to call connected user terminals. That is, while Haartsen does sequentially *assign* something, i.e., remote terminals to available base station radios, it does not, inter alia, *sequentially change bandwidths* allocated to call connected user terminals, as required by independent claim 1.

From the foregoing it is clear that the cited portions of Haartsen contain no teaching or remote suggestion of sequentially changing bandwidths allocated to call connected user terminals at all. And, at least due to this deficiency, these portions also do not teach or suggest sequentially changing bandwidths such that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and user use condition information indicating the current use conditions of the call connected ones of the user terminals, as required in independent claim 1.

Thus, even when combined, Mazzara and Haartsen do not teach or suggest all of the features of claim 1. For at least this reason, claim 1 is believed clearly patentable over the cited art.

Independent administrative apparatus claim 10, independent method claim 18, and independent computer readable medium claim 26 each recite a substantially identical feature relating to the sequential changing of bandwidths allocated to call connected user terminals, and are thus believed patentable for at least the same reasons discussed above in connection with independent claim 1.

In the Advisory Action issued on June 4, 2009, continuation sheets were included that purported to respond to the arguments presented above. However, Applicant did not understand the lengthy remarks, which appear to consist primarily of typed out word-for-word portions of Haartsen's specification, to actually address the issues discussed above concerning the deficiency of the cited passages of Haartsen as against the recited features of the independent claims.

Dependent Claims 2-4, 6-9, 11, 12, 14-17, 19, 20 and 22-25

The dependent claims are believed patentable for at least the same reasons as their respective base claims and stand or fall with their respective base claims.

B. Conclusion

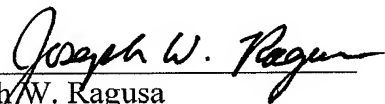
In view of the arguments set forth above, Applicant respectfully submits that each of the pending claims is in immediate condition for allowance and requests that the Board order the withdrawal of the pending rejections.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. As indicated above, the claims in Appendix A include the amendments filed by Applicant on December 24, 2008.

Dated: January 6, 2010

Respectfully submitted,

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**APPENDIX A**

**Claims Involved in the Appeal of Application Serial No. 10/574,664**

1. (Previously Presented) A wireless line sharing network system in a mobile communication network system capable of a plurality of communications at licensed radio frequencies, comprising:

a plurality of user terminals that subscribe to a plurality of communication carriers, respectively;

a plurality of wireless base stations capable of communicating with the respective user terminals at the radio frequencies;

a control station for controlling the wireless base stations and connecting each of the user terminals to a corresponding communication carrier network;

a call acceptance controller for, when there is a request for call connection to a user terminal, accepting the call as well as reserving bandwidth in response to the call connection request based on at least carrier band information indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract and carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers, and updating the carrier use condition information; and

a bandwidth change means for sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and user use condition information indicating the current use conditions of the call connected ones of the user terminals.

2. (Original) The wireless line sharing network system as claimed in claim 1, wherein the call acceptance controller updates the bandwidth reserved by using licensed band information of a communication carrier network corresponding to the user terminal concerning the call connection request.

3. (Original) The wireless line sharing network system as claimed in claim 1, further comprising a bandwidth determination means for determining bandwidth for the call connection request based on bandwidth commonly indicated in user support band information of the user terminal contained in the call connection request, licensed band information of a corresponding communication carrier network concerning the call connection request and carrier support band information on predetermined bands supported by the respective communication carriers with respect to each service.

4. (Original) The wireless line sharing network system as claimed in claim 3, wherein the bandwidth determination means includes:

a bandwidth list generation means for generating a list of at least one selectable bandwidth based on the user support band information, the licensed band information and the carrier support band information; and

a determination means for selecting bandwidth from the bandwidth list in descending order, and determining the selected bandwidth as bandwidth for the call connection request when the selected bandwidth is not greater than idle bandwidth obtained from the carrier use condition information.

5. (Cancelled).

6. (Original) The wireless line sharing network system as claimed in claim 4, further comprising a bandwidth change means for sequentially selecting call connected user terminals in descending order of bandwidths allocated to the user terminals based on user use condition information, and changing the bandwidth allocated to the call connected user terminal so that the used bandwidth of each of the communication carriers is in a predetermined range according to the bandwidth list corresponding to the selected user terminal.

7. (Original) The network system as claimed in claim 1, further comprising a mediator controller for, in the case where bandwidth cannot be reserved for the call connection request, mediating between a communication carrier with insufficient bandwidth and a communication carrier with excess bandwidth based on the carrier band information and the carrier use condition information so that the communication carrier with excess bandwidth leases idle bandwidth to the communication carrier with insufficient bandwidth.

8. (Original) The network system as claimed in claim 1, further comprising a mediator controller for, in the case where the use of radio bandwidth exceeds the predetermined percentage of the radio bandwidth defined by contract in a communication carrier, mediating between the communication carrier with insufficient bandwidth and a communication carrier with excess bandwidth so that the communication carrier with excess bandwidth leases idle bandwidth to the communication carrier with insufficient bandwidth.

9. (Original) The network system as claimed in claim 1, further comprising an accounting controller for charging each of the communication carriers based on the lease agreement concluded with the carrier.

10. (Previously Presented) An administrative apparatus for sharing a mobile communication network capable of a plurality of communications at licensed radio frequencies among a plurality of communication carriers, the apparatus comprising:

a first table for searchably storing carrier band information indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract;

a carrier use condition memory for searchably storing carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers;

a user use condition memory for searchably storing user use condition information indicating the current use conditions of call connected ones of a plurality of user terminals that subscribe to the communication carriers, respectively;

a controller for controlling the used bandwidth of each of the communication carriers in units of at least bandwidth used by each user terminal based on the carrier band information, the carrier use condition information and the user use condition information, and updating the carrier use condition information and the user use condition information; and

a bandwidth change means for sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and user use condition information indicating the current use conditions of the call connected ones of the user terminals.



11. (Original) The administrative apparatus as claimed in claim 10, wherein the controller includes:

a call acceptance controller for, when there is a request for call connection to a user terminal, accepting the call as well as reserving bandwidth in response to the call connection request based on at least the carrier band information indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract and the carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers; and

a bandwidth determination means for determining bandwidth for the call connection request based on bandwidth commonly indicated in user support band information of the user terminal contained in the call connection request, licensed band information of a corresponding communication carrier network concerning the call connection request and carrier support band information on predetermined bands supported by the respective communication carriers with respect to each service.

12. (Original) The administrative apparatus as claimed in claim 11, wherein the bandwidth determination means includes:

a bandwidth list generation means for generating a list of at least one selectable bandwidth based on the user support band information, the licensed band information and the carrier support band information; and

a determination means for selecting bandwidth from the bandwidth list in descending order, and determining the selected bandwidth as bandwidth for the call connection request when the selected bandwidth is not greater than idle bandwidth obtained from the carrier use condition information.

13. (Cancelled).

14. (Original) The administrative apparatus as claimed in claim 11, wherein the controller further includes a bandwidth change means for sequentially selecting call connected user terminals in descending order of bandwidths allocated to the user terminals based on user use condition information, and changing the bandwidth allocated to the call connected user terminal so that the used bandwidth of each of the communication carriers is in a predetermined range according to the bandwidth list corresponding to the selected user terminal.

15. (Original) The administrative apparatus as claimed in claim 10, wherein the controller further includes a mediator controller for, in the case where bandwidth cannot be reserved for the call connection request, mediating between a communication carrier with insufficient bandwidth and a communication carrier with excess bandwidth based on the carrier band information and the carrier use condition information so that the communication carrier with excess bandwidth leases idle bandwidth to the communication carrier with insufficient bandwidth.

16. (Original) The administrative apparatus as claimed in claim 10, wherein the controller further includes a mediator controller for, in the case where the use of radio bandwidth exceeds the predetermined percentage of the radio bandwidth defined by contract in a communication carrier, mediating between the communication carrier with insufficient bandwidth and a communication carrier with excess bandwidth so that the communication carrier with excess bandwidth leases idle bandwidth to the communication carrier with insufficient bandwidth.

17. (Original) The administrative apparatus as claimed in claim 10, wherein the controller further includes an accounting controller for charging each of the communication carriers based on the lease agreement concluded with the carrier.

18. (Previously Presented) An administrative method for sharing a mobile communication network capable of a plurality of communications at licensed radio frequencies among a plurality of communication carriers, the method comprising the steps of:

searchably storing carrier band information indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract;

searchably storing carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers;

searchably storing user use condition information indicating the current use conditions of call connected ones of a plurality of user terminals that subscribe to the communication carriers, respectively;

determining, when a user terminal requests call connection, whether or not there is idle bandwidth available for accommodating the call connection request based on the carrier band information and carrier use condition information;

forwarding, when there is idle bandwidth available for accommodating the call connection request, the call connection request to a communication carrier network corresponding to the user terminal;

determining bandwidth for the call connection request based on a response to the call connection request from the communication carrier network;

updating the carrier use condition information and the user use condition information according to the determined bandwidth; and

sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and the user use condition information.

19. (Original) The administrative method as claimed in claim 18, further comprising the step of searchably storing carrier support band information on predetermined bands supported by the respective communication carriers with respect to each service, wherein bandwidth for the call connection request is determined based on bandwidth commonly indicated in user support band information of the user terminal contained in the call connection request, licensed band information contained in the response to the call connection request from the communication carrier network and the carrier support band information.

20. (Original) The administrative method as claimed in claim 19, further comprising, in the step of determining bandwidth for the call connection request, the steps of:

generating a list of at least one selectable bandwidth based on the user support band information, the licensed band information and the carrier support band information;

selecting bandwidth from the bandwidth list in descending order; and

determining the selected bandwidth as bandwidth for the call connection request when the selected bandwidth is not greater than idle bandwidth obtained from the carrier use condition information.

21. (Cancelled).

22. (Original) The administrative method as claimed in claim 20, further comprising the steps of sequentially selecting call connected user terminals in descending order of bandwidths allocated to the user terminals based on user use condition information; and changing the bandwidth allocated to the call connected user terminal so that the used bandwidth of each of the communication carriers is in a predetermined range according to the bandwidth list corresponding to the selected user terminal.

23. (Original) The administrative method as claimed in claim 18, further comprising the step of, in the case where bandwidth cannot be reserved for the call connection request, mediating between a communication carrier with insufficient bandwidth and a communication carrier with excess bandwidth based on the carrier band information and the carrier use condition information so that the communication carrier with excess bandwidth leases idle bandwidth to the communication carrier with insufficient bandwidth.

24. (Original) The administrative method as claimed in claim 18, further comprising the step of, in the case where the use of radio bandwidth exceeds the predetermined percentage of the radio bandwidth defined by contract in a communication carrier, mediating between the communication carrier with insufficient bandwidth and a communication carrier with excess bandwidth so that the communication carrier with excess bandwidth leases idle bandwidth to the communication carrier with insufficient bandwidth.

25. (Original) The administrative method as claimed in claim 18, further comprising the step of charging each of the communication carriers based on the lease agreement concluded with the carrier.

26. (Previously Presented) A computer readable medium storing a computer program for sharing a mobile communication network capable of a plurality of communications at licensed radio frequencies among a plurality of communication carriers, the computer program causing a computer to perform the steps of:

searchably storing carrier band information indicating radio bandwidth allocation patterns defined by the respective communication carriers on a contract;

searchably storing carrier use condition information indicating the current use conditions of the bandwidth of the respective communication carriers;

searchably storing user use condition information indicating the current use conditions of call connected ones of a plurality of user terminals that subscribe to the communication carriers, respectively;

determining, when a user terminal requests call connection, whether or not there is idle bandwidth available for accommodating the call connection request based on the carrier band information and carrier use condition information;

forwarding, when there is idle bandwidth available for accommodating the call connection request, the call connection request to a communication carrier network corresponding to the user terminal;

determining bandwidth for the call connection request based on a response to the call connection request from the communication carrier network;

updating the carrier use condition information and the user use condition information according to the determined bandwidth; and

sequentially changing bandwidths allocated to call connected user terminals so that the used bandwidth of each of the communication carriers is in a predetermined range based on at least the carrier band information, the carrier use condition information and the user use condition information.

**APPENDIX B**

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.



**APPENDIX C**

No related proceedings are referenced in II. above, hence copies of decisions in related proceedings are not provided.